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10/573,026

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EXAMINER

UHLIR, CHRISTOPHER J

ART UNIT

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2837

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,026	Applicant(s) ARZABALA, ROBERTO RIBER	
	Examiner CHRISTOPHER UHLIR	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Receipt is acknowledged of applicant's amendment filed September 22, 2008.

Claims 1-13 are pending and an action on the merits is as follows.

Objections to drawings have been withdrawn.

Objection to claim 2 has been withdrawn.

Applicant's arguments with respect to claims have been considered and are addressed below.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6, 7, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gyorgy (US 5,662,064) in view of Piltz (US 4,913,306).

Regarding claim 1, Gyorgy discloses a horn 10 shown in Fig. 1 to have a blow tube or pressure tube 14 where air is blown into a pressure chamber or clearance 21 (column 3 lines 20-21). This figure further shows an acoustic chamber partially formed by sound tube 11 coaxial with said pressure chamber 21, formed by tube 14 (column 3 lines 2-4). Gyorgy further discloses a strip or membrane 22, further shown in Fig. 1 to be coaxial with said acoustic chamber and fixed at its periphery to a free end of the

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partition of tube 14, enclosing said pressure chamber 21. This reference further discloses said strip 22 to be commonly made of metal in the prior art (column 1 lines 24-26), but describes the use of a strip 22 made out of plastic or polyethylene (column 3 lines 15-16). Gyorgy fails to explicitly disclose that the vibrating metal strip is made of a plastic coated aluminum.

However Piltz teaches an end closure being a flexible strip or membrane being made of plastic coated aluminum (column 3 lines 40-43).

Given the teachings of Piltz, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the horn disclosed by Gyorgy with the vibrating metal strip to be made of plastic coated aluminum. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In *re Leshin*, 125 USPQ 416. Doing so would provide a weather proof covering, where the sound can be adjusted through varying the thickness of the aluminum used.

In reference to claim 2, Gyorgy modified by Piltz discloses a horn as stated above, where Fig. 1 of Gyorgy shows the acoustic chamber to be partially formed by a cylindrical tube or sound tube 11 that abuts the vibrating member 22 at the boundaries of D₁ (column 3 lines 29-30). This figure further shows the end of the cylindrical tube that abuts the vibrating member 22 to extend in an axial direction beyond the free edge of a partition to which the vibrating strip 22 is fixed, represented by Δ (column 3 lines 27-28).

In reference to claim 3, Gyorgy modified by Piltz discloses a horn as stated above, where Gyorgy further discloses a sound tube to have a tubular and cylindrical area and configures the acoustic chamber, as can be seen from Fig. 1. This figure further shows a cap-shaped area configuring the pressure chamber 21, which envelopes and is coaxial with the sound tube 11. Gyorgy modified by Piltz fails to explicitly disclose the acoustic chamber and the pressure chamber to be formed of one piece.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the acoustic chamber and pressure chamber out of one piece, since it has been held that making various elements into an integral structure involves only routine skill in the art. In *re Larson*, 340 F.2d 965,968,144 USPQ 347,347 (CCPA 1965). Doing so would provide a more efficient and cost-effective manufacturing process for mass production of the horn.

In reference to claim 4, Gyorgy modified by Piltz discloses a horn as stated above, where Gyorgy further discloses as shown in Fig. 1, a portion of the body or additional tube 18 forming the acoustic chamber is opposite the pressure chamber 21, and adopts a bell-mouthed configuration divergent toward its free end.

In reference to claim 6, Gyorgy modified by Piltz discloses a horn as stated above, where Piltz further discloses the vibrating metal strip to be fixed by means of heat sealing (column 1 lines 60-63).

In reference to claim 7, Gyorgy modified by Piltz discloses a horn as stated above, where Gyorgy further discloses the opening of the partition forming pressure

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chamber 21 to have a groove or step 25 on part of the surface of its edge, as can be seen from Fig. 1. Said groove 25 favors the attachment of the vibrating metal strip 22 (column 3 lines 21-24).

In reference to claim 13, Gyorgy modified by Piltz discloses a horn as stated above, where Gyorgy further discloses a ring 24, as can be seen from Fig. 1.

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gyorgy (US 5,662,064) modified by Piltz (US 4,913,306) as applied to claim 1 above, further in view of Larkin et al. (US 5,860,743). Gyorgy modified by Piltz discloses a horn as stated above, where Piltz discloses the vibrating metal strip to be welded to the free end or end closure (column 1 lines 40-43). These references fail to explicitly disclose the use of ultrasonic welding.

However Larkin et al. teaches a flexible aluminum sheet covered with plastic, where a means of ultrasonic welding or sealing is used to secure (column 2 lines 46-50).

Given the teachings of Larkin et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the horn disclosed by Gyorgy as modified by Piltz with using a means of ultrasonic welding. Doing so would provide an easy and inexpensive method of securing the flexible metal strip, as taught by Larkin et al. (column 1 lines 39-41).

4. Claims 8, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gyorgy (US 5,662,064) modified by Piltz (US 4,913,306) as applied to claim 1 above, further in view of LeBlanc et al. (US 4,970,983).

In reference to claim 8, Gyorgy modified by Piltz discloses a horn as stated above where the vibrating membrane 22 is held by a retaining ring 24 (column 3 lines 21-23), as can be seen from Fig. 1. These references fail to explicitly disclose an extension of the partition forming the pressure chamber in its outer area being bent over the vibrating membrane.

However LeBlanc et al. teaches a horn shown in Fig. 1 to have an extension of a partition forming pressure chamber 62, having an outer area being bent over a membrane or back 26.

Since these references pertain to a horn, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the horn disclosed by Gyorgy as modified by Piltz with an extension of the partition forming the pressure chamber in its outer area to be bent over the vibrating membrane as taught by LeBlanc et al. Doing so would provide a method of removably fixing said vibrating membrane to the horn through frictional engagement with the retaining ring and extension.

In reference to claims 11 and 12, Gyorgy modified by Piltz discloses a horn as stated above, but fails to explicitly disclose the cap to be semi-spherical, or semi-ellipsoidal.

However LeBlanc et al. teaches a horn shown in Fig. 1 to have a cap that is semi-spherical in shape. This figure further shows the interior of said cap to be semi-ellipsoidal.

Since these references pertain to a horn, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the horn disclosed

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by Gyorgy as modified by Piltz with a cap being semi-spherical or semi-ellipsoidal as taught by LeBlanc et al. It has been held that a mere change in shape is generally within the level of ordinary skill in the art. In *re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Doing so would change the appearance of the horn which would appeal to different consumers, therefore increasing sales.

5. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gyorgy (US 5,662,064) modified by Piltz (US 4,913,306) as applied to claim 1 above, further in view of Belli (US 5,600,080).

In reference to claim 9, Gyorgy modified by Piltz discloses a horn as stated above, but fails to disclose a T-shaped part connected to blow tubes for removably coupling two bodies.

However Belli teaches a T-shaped part or mounting apparatus between two bodies or drums as shown in Fig. 4. Said T-shaped part is shown in Fig. 5 to be attached to a body through opening 26, and said bodies can be removed from said T-shaped part through adjusting screw 24.

Given the teachings of Belli, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the horn disclosed by Gyorgy as modified by Piltz with a T-shaped part connected to blow tube holes for removably coupling two bodies. Doing so would provide an apparatus to mount two bodies while allowing easy and quick removal as taught by Belli (column 2 lines 49-51).

In reference to claim 10, Gyorgy modified by Piltz, further modified by Belli discloses a horn having a T-shaped part as stated above. Belli further shows in Fig. 5

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said T-shaped part to have at least one hole for receiving mounting rod 28 and its respected screw.

Response to Arguments

Applicant's arguments filed September 22, 2008 have been fully considered but they are not persuasive.

Applicant states on page 10 of the response that Piltz is directed to a “secondary seal for enclosing a packaging container” and therefore “it would not have been obvious to one of ordinary skill in the art to combine the teachings of Piltz with Gyorgy.” However Gyorgy was relied on to disclose most of the structural limitations of applicant’s claim 1, but failed to explicitly disclose the vibrating strip to be made of a plastic coated aluminum. The Piltz reference was relied on to teach an “end closure or cover” (column 1 lines 6-7) having a flexible material “for instance a plastics coated aluminum foil” (column 3 lines 41-43). Since it has been held to be within the general level of ordinary skill in the art to select a known material on the basis of its suitability for the intended use, Gyorgy and Piltz are properly combined to disclose applicant’s invention as claimed.

On page 11 of the response, applicant states that the examiner concludes “that it would have been obvious to coat aluminum with plastic to provide weather-proofing for a vibrating membrane”. However as shown above, Gyorgy discloses a horn where a vibrating strip is commonly made of metal in the prior art (column 1 lines 24-26), but also describes the use of a vibrating strip made out of plastic or polyethylene (column 3 lines 15-16). The Piltz reference was relied on to teach a flexible membrane made of

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plastic coated metal or aluminum as stated above. The plastic coated aluminum taught by Piltz would provide benefits of both the commonly used metal vibrating strip, and the suggested plastic vibrating strip as disclosed by Gyorgy. Since it is known that most metals are not naturally weather-proof, providing a plastic covered aluminum vibrating strip would allow the horn to be used outdoors for long periods of time without damaging the vibrating strip. Therefore the combination of Piltz's plastic coated aluminum with the horn disclosed by Gyorgy would properly disclose applicant's invention as claimed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER UHLIR whose telephone number is (571)270-3091. The examiner can normally be reached on Monday-Thursday 8:00am-6:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on 571-272-2227.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CHRISTOPHER UHLIR/
Examiner, Art Unit 2837
November 26, 2008

/Jeffrey Donels/

Primary Examiner, Art Unit 2837